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A new variety of *Dichanthium caricosum* (L.) A. Camus (Poaceae) from Papikonda National Park, Andhra Pradesh, India

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ABSTRACT

A new variety of *Dichanthium caricosum* (L.) A. Camus (Poaceae) is described and illustrated from Papikonda National Park, Andhra Pradesh, India. The new variety differs from the typical variety by its two lobed lemma of pedicelled spikelets and solitary racemes.

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INTRODUCTION

The genus *Dichanthium* P. Willemet comprises ca 22 species distributed in tropical and subtropical regions of old world (Mabberley, 2017). In India the genus is represented by 10 species (Kabeer & Nair, 2009) and 03 species are known from Andhra Pradesh (Pullaiah, 2018). *Dichanthium caricosum* (L.) A. Camus is distributed from Indian Subcontinent to China and Malesia and easily differentiated from other species by its one to several digitate racemes, tightly overlapping spikelets and shape of lower glume of the sessile spikelets (Bor, 1960; Deshpande, 1984). While exploring the floral diversity of Papikonda National Park, Andhra Pradesh, the senior author has collected a *Dichanthium* species from Kondamodalu Beat, Gokavaram Range. The collected specimens were similar to *D. caricosum* but different in having consistently solitary racemes and bilobed lemma of the pedicelled spikelets. Hence, it has been described here as a new variety.

TAXONOMY

Dichanthium caricosum (L.) A. Camus var. ***bilobum*** Y. Mahesh, Rasingam & J. Swamy**,** var. *nov.* (Fig. 1).

Dichanthium caricosum var. *bilobum* differs from the typical variety var. *caricosum* by its solitary racemes and deeply bilobed lemma of pedicelled spikelets, whereas in the typical variety the racemes are solitary or 2-7, digitate, upper lemma of pedicelled spikelets absent or narrowly elliptic when present (Table 1).

Type: INDIA, Andhra Pradesh, East Godavari District, Papikonda National Park, Gokavaram Range, Kondamodalu Beat 17.50216˚ N, 81. 57927 E˚, 439 m.s.l., 30 January 2019, *Y Mahesh 010059* (Holotype CAL, Isotypes BSID).

Decumbent perennials. Culms geniculate, ca 35 cm high, more or less ribbed; nodes white bearded to glabrous, lower ones rooting. Leaf sheath keeled towards apex, compressed 2.5– 3.5 × ca 0.3 cm, glabrous; ligule ca 0.6 mm long, acute, membranous with minutely fimbriate apex; blade flat, linear–lanceolate, 5–8 × 0.2–0.3 cm, rounded to truncate at base, cartilaginous, scabrous along margins, acuminate at apex, mid nerve prominent, sparsely tuberculate hairy on surface. Racemes solitary, 2.1–4.0 × ca 0.3 cm, exserted from spathes; peduncle ca 16.3 cm long, glabrous, rarely hairy below base of the raceme. Spikelets paired, closely imbricate, one sessile, awned, other pedicelled, unawned. Lower 2 or 3 spikelets homogamous, sterile or empty; joints and pedicels 1-1.3 mm long, narrow, slightly thickened upwards, more or less oblique at apex, hairy along margins, light yellowish - purple; pedicels less than half of sessile spikelet, entire spikelet disarticulating from tip of joint and pedicel; callus short, bearded, whitish. Sterile homogamous spikelets obovate-elliptic, ca 3.9–4.1 × ca 1.8 mm, obtuse at apex, truncate at base, purplish-yellow, hairy up to above middle. Sessile spikelets obovate, 3.7–4.0 × 1.8–2.0 mm, obtuse, purplish -yellow, sparsely hairy at base, densely so near apex, awned; callus short bearded. Lower glume obovate, 3.7–4.0 × 1.8–2.0 mm, obtuse, coriaceous, light yellowish, 9-11 nerved, prominently 2-keeled; keels slightly winged, hairy up to middle or apex, margins inflexed, hirsute. Upper glume narrowly elliptic to lanceolate, 3.5–3.7 × ca 1.06 mm, obtuse, membranous, 1-nerved, 2- keeled; keels scaberulous in upper

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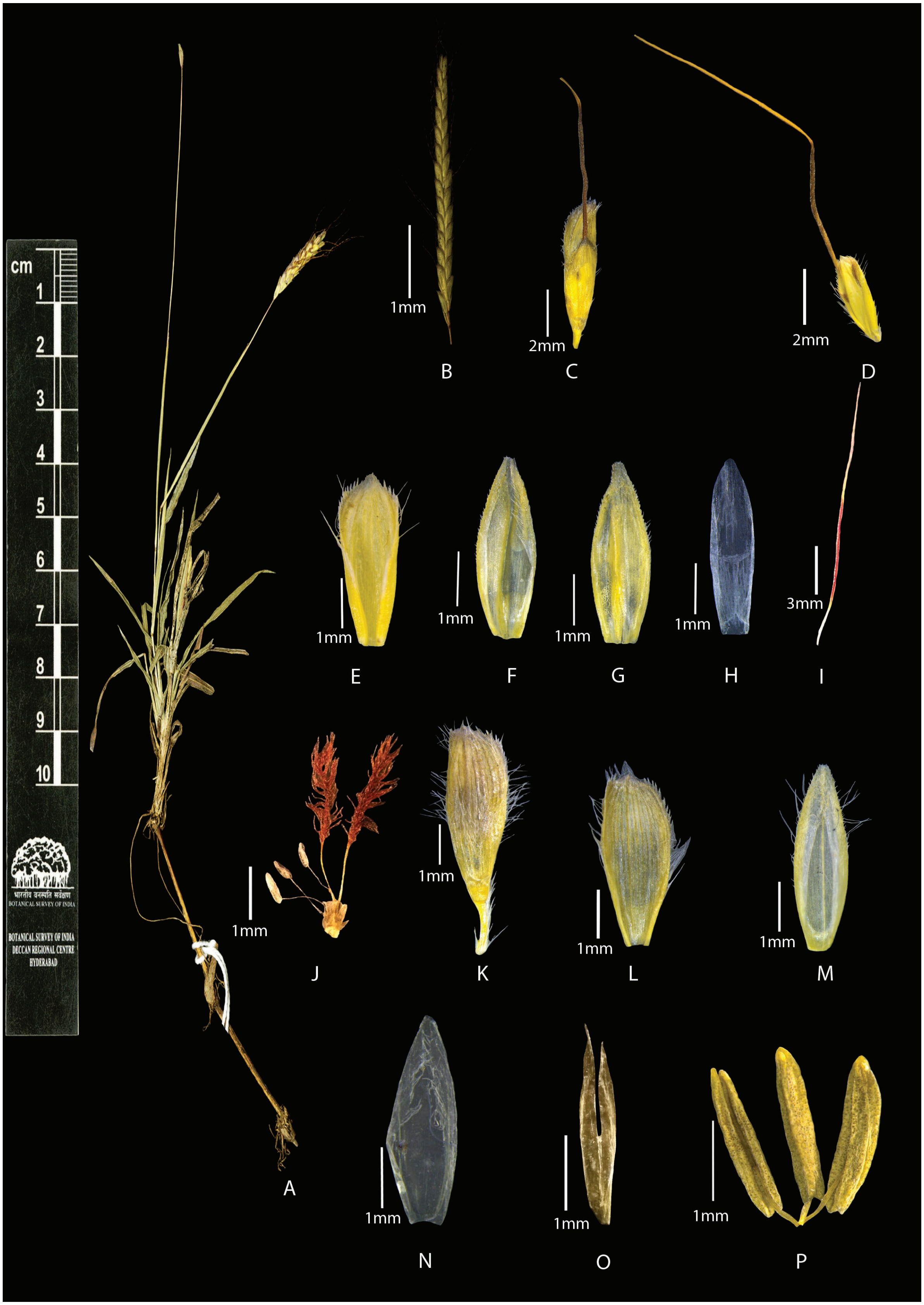

Figure 1. *Dichanthium caricosum* var. *bilobum* Y. Mahesh, Rasingam & J. Swamy *var. nov*.; **A.** Habit; **B.** Raceme; **C.** Pair of spikelets; **D.** Sessile spikelet; **E.** Lower glume; **F-G.** Upper glume; **H.** Lower lemma; **I.** Upper lemma; **J.** Pistil & stamens; **K.** Pedicelled spikelet; **L.** Lower glume; **M.** Upper glume; **N.** Lower lemma; **O.** Upper lemma; **P.** Stamens.

Table 1. Morphological differences between *Dichanthium caricosum* var. *caricosum* and *D. caricosum* var. *bilobum*

Character	***D. caricosum* var. *caricosum***	***D.caricosum* var. *bilobum* var. nov.**
Leaf sheath	5-15 cm long	2.5– 3.5 cm long
Racemes	Solitary or 2-7, sub-digitate, 5-7 cm long	Racemes solitary, 2.1–4.0 cm long
Palea of sessile spikelet	Absent or sometimes hyaline, narrowly ovate, 2.8-3 × 0.3-0.5 mm, nerveless, apex acuminate.	Consistently absent in all spikelets.
Upper lemma of pedicelled spikelet	Absent or narrowly elliptic when present, 2.2-2.6 mm long, obtuse at apex.	Present, linear or narrowly elliptic-lanceolate, 2.7–2.9 mm long, bilobed; lobes unequal, acute-acuminate at apex.

half, margins infolded, ciliate above the middle. Florets 2, lower sterile, upper bisexual, both epaleate. Lower lemma lanceolate, 3.4–3.6 × 0.7–0.9 mm, apex muticous, membranous, hyaline, nerveless, margins inflexed, finely ciliate in middle. Palea absent. Upper lemma reduced to hyaline base of awn, ca 2.2 mm long, straight; awn geniculate, 1.6–1.8 cm long, column twisted, rufous, bristles finely barbellate. Lodicules 2, truncate, ca 0.4 × 0.3 mm, membranous, hyaline. Stamens 3; anthers ca 1.0–1.2 mm long, greenish-yellow; filaments ca 1.8 mm long, hyaline. Pistil 2.9–3.6 mm long; ovary 0.6 mm long, light brown; styles ca 1 mm long; stigmas 2, unequal, 1.6-1.8 mm long. Caryopsis lanceolate-oblong, ca 0.7 × 0.3 mm, brown. Pedicelled spikelets obovate to oblanceolate, 3.6-3.8 × 1.2-1.6 mm, narrowly truncate at base, obtuse at apex, hairy on surface. Lower glume obovate to oblanceolate, 3.5–3.7 × 1.5–1.7 mm, chartaceous, light green, 9-13 nerved, hairy on upper surface, 2-keeled; keels ciliate 2/3 above on margins. Upper glume ovate to elliptic, 3.5–3.7 × ca1.2 mm, retuse, membranous, margins ciliate above the middle, 3–nerved, 2-keeled; keels ciliate. Lower lemma elliptic-ovate, 3.1–3.3 × 1.07 mm, muticous, nerveless, margins slightly inflexed, ciliate on above the middle. Upper lemma 2.7–2.9 × 0.3 mm, bilobed; lobes unequal, linear or narrowly elliptic-lanceolate, acute-acuminate at apex. Stamens 3; anthers well developed, 1.7–1.9 × 0.3–0.4 mm; filaments 0.3-0.0.5 mm long.

Flowering & Fruiting: September- March.

Distribution & Ecology: This variety is currently known from type locality only. It was found in moist places adjacent to paddy field at an elevation of 439 m, in association with *Ammannia* sp., *Cyperus* spp., *Kyllinga* sp. and other grasses.

Etymology: The varietal epithet refers to the deeply bilobed upper lemma of pedicelled spikelets.

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